

**AMENDMENTS TO THE CLAIMS**

1-6. (Cancelled)

7. (Currently Amended) A manufacturing method for precise multi-pole magnetic components, comprising the steps of:

providing a substrate having at least one surface; and

forming a plurality of circuit layers having circuits formed thereon on the surface of the substrate using the PCB manufacturing technology, wherein a top layer of the plurality of circuit layers includes a current input terminal and an current output terminal;

wherein each ~~layer~~ of the circuit layers is separated from another by an insulating layer; the circuits on the different circuit layers are connected into a single circuit by drilling holes ~~and filling filled them~~ with soldering tin; the current input and output terminals on the top layer are reserved for connecting to a current source; each of the circuit layer ~~of the circuit~~ has a meander structure having a linear type extending along one-dimensional direction for providing a current to flow in opposite directions to produce an alternate magnetic pole distribution; ~~and such that~~ the magnetic field distribution of each of the circuit layer ~~of the circuit~~ is arranged ~~to stack with~~ by way of enhancing configuration.

8. (Currently Amended) The manufacturing method of claim 7, wherein the width of the circuit ~~wire~~ on each of the circuit layer is between 75 $\mu$ m to 2500 $\mu$ m.

9. (Currently Amended) The manufacturing method of claim 7, wherein the gap between two adjacent circuits ~~wires~~ on each of the circuit layer is between  $75\mu\text{m}$  to  $2500\mu\text{m}$ .

10-11. (Cancelled)

12. (New) A manufacturing method for precise multi-pole magnetic components, comprising the steps of:

providing a substrate having at least one surface; and

forming a plurality of circuit layers having circuits formed thereon on the surface of the substrate using the PCB manufacturing technology, wherein a top layer of the plurality of circuit layers includes a current input terminal and a current output terminal;

wherein each of the circuit layers is separated from another by an insulating layer; the circuits on the circuit layers are connected into a single circuit by drilling holes filled with soldering tin; the current input and output terminals on the top layer are reserved for connecting to a current source; each of the circuit layer has a meander structure having an annular pattern for providing a current to flow in opposite directions to produce an alternate magnetic pole distribution such that the magnetic field distribution of each of the circuit layer is arranged by way of enhancing configuration.

13. (New) The manufacturing method of claim 12, wherein the width of the circuit on each of the circuit layer is between  $75\mu\text{m}$  to  $2500\mu\text{m}$ .

14. (New) The manufacturing method of claim 12, wherein the gap between two adjacent circuits on each of the circuit layer is between 75 $\mu$ m to 2500 $\mu$ m.